

Executive Summary of
**An Examination of Changes in the Distribution of Wealth
From 1989 to 1998:
Evidence from the Survey of Consumer Finances**

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The views presented in this paper are those of the author alone, and they do not necessarily reflect the views of the Board of Governors of the Federal Reserve System.

- Over the 1995 to 1998 period, *Forbes* estimates that the total net worth of the wealthiest 400 individuals and the number of billionaires both more than doubled.¹ The level of wealth needed to qualify for the *Forbes* list increased at the somewhat more moderate rate of about 50 percent over this time period.
- The SCF explicitly excludes the *Forbes* 400 from its sample, but the survey has good coverage of the population below that level. The survey shows an increase of about 25 percent in the median level of wealth between 1995 and 1998.
- Overall, the SCF data show some indications of increased concentration of wealth, but in general, the changes in concentration are relatively small, and they are not estimated with sufficient precision to be statistically significant.
- The Gini coefficient, a traditional measure of inequality, shows greater inequality in the distribution of net worth in 1998 than in 1995, but the difference is not statistically significant. Moreover, the ratio is very little changed over the period since 1989 when comparable SCF data have been available.
- Similarly, between 1995 and 1998, the wealth share of the bottom 90 percent of the net worth distribution declined 0.9 percentage point, and that of the top 1/2 percent in the SCF declined 1.3 percentage points. At the same time, the wealth share rose correspondingly for the remaining group—families in the top decile, but below the top 1/2 percent. However, the changes in shares are not statistically significant. Moreover, the shares have not changed significantly from the pattern observed in the 1989 SCF.
- Nonetheless, some statistically significant changes in the levels of wealth were apparent in the SCF across the wealth distribution. Different factors lie behind the changes at

1. All dollar figures reported here are nominal.

different points in the distribution. For the bottom 90 percent of the wealth distribution, increased holdings of principal residences accounted for most of their rise in net worth, but increased holdings of stocks, pension accounts, and bank accounts were also important components of the rise; a large increase in debt (mainly mortgages) for this group offset about a quarter of the rise in their asset holdings. For the upper decile of the wealth distribution, the increase in wealth was largely a product of increased holdings of stocks and business assets; changes in debt holdings were relatively less important in determining the wealth change of this group.

PRELIMINARY AND INCOMPLETE

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This paper provides information on changes in the distribution of net worth between 1995 and 1998.² The most important finding is that, despite quite large shifts in assets and liabilities of U.S. families over this period, data from the 1995 and 1998 Surveys of Consumer Finances (SCF) show remarkably little change in a range of measures of the concentration of wealth among the wealthiest families. The remainder of this memorandum provides more information on changes in the net worth distribution, drawing on the SCF and supplementary data from *Forbes*.

***Forbes* Estimates**

The annual *Forbes* information on the 400 wealthiest Americans is widely reported, and it appears to have a powerful role in shaping perceptions of changes in the distribution of net worth. From 1995 to 1998, the total amount of net worth accounted for by the *Forbes* 400 rose in nominal terms from about \$357 billion to about \$740 billion—a 107.3 percent increase; the number of billionaires rose from 94 to 191—a 103.2 percent increase. Such changes have been taken to suggest that a strong increase in wealth has changes have been taking place all across the broader upper end of the net worth distribution. However, over the same time, the minimum level of wealth needed to qualify for the *Forbes* list rose from \$340 million in 1995 to \$500 million in 1998—a somewhat more moderate 47.1 percent increase.³ This result could be taken to suggest that the escalation of wealth just below the very top was less dramatic than that at the very top.

SCF Estimates

Although the SCF sample explicitly excludes members of the *Forbes* 400 (as well as a relatively small number of very famous people), every other U.S. household is eligible to be included, and a large proportion of the sample is devoted to relatively wealthy families.⁴ The SCF

2. In this paper, the terms “net worth” and “wealth” are used interchangeably to refer to the difference between assets and liabilities.

3. These changes accelerated in 1999, but the cutoff continued to grow less rapidly than the total wealth of the group and the number of billionaires. In that year, the total wealth held by the *Forbes* 400 was about \$1,035 billion (a 39.9 percent increase from 1998), there were 267 billionaires (a 40.0 percent increase), and the minimum wealth in the group was \$625 million (a 25.0 percent increase). Figures for 2000 will be available in October of this year.

4. For detailed information on the SCF sample design, see Arthur B. Kennickell, “List Sample Design (continued...) ”

should provide good information on the wealth of the upper end of the net worth distribution below the very top level, although it is subject to non-negligible statistical variability implied by the sample size and other such technical characteristics of measurement in the survey.

For comparing distributions of net worth, there are no unambiguous and universally agreed summary measures. Several indicators are presented here for the net worth distributions in 1995 and 1998: the means and medians of the distributions, the Gini coefficients, and the shares of total net worth held by different groups within the distribution. In addition, a graphical summary is provided of the shifts in wealth levels and percentage changes in wealth across the distributions for the two survey years.

Medians and Means

Median net worth rose in real terms from \$60,900 in 1995 to \$71,600 in 1998 (table 1);⁵ this 17.6 percent real increase at the middle of the distribution is a bit less than half of the 38.5 percent real increase in the *Forbes* 400 cut-off. At the same time, mean net worth rose in real terms from \$224,800 in 1995 to \$282,500 in 1998, a 25.7 percent increase. An increase in the mean that is higher than the corresponding increase in the median is often taken to suggest an increase in the wealth share of families at the top end of the distribution. However, as other indicators reported below show, this simple interpretation is somewhat misleading. Moreover, the standard errors of the estimates are sufficiently large that it is hard to argue in that the rates of change of the two measures are significantly different at traditional levels of statistical confidence.

4. (...continued)
for the 1998 Survey of Consumer Finances,” <http://www.federalreserve.gov/pubs/oss/oss2/method.html>. For discussion of other results from the 1995 and 1998 surveys, see Arthur B. Kennickell, Martha Starr-McCluer, and Brian J. Surette, “Recent Changes in U.S. Family Finances: Results from the 1998 Survey of Consumer Finances,” *Federal Reserve Bulletin*, V.86, pp.1 -29.

5. The data in the table have been adjusted using the “current methods” version of the CPI. For the period from 1995 to 1998, this index showed a 6.2 percent increase in the price level.

Table 1: Median and Mean Net Worth, 1995 and 1998 SCFs, Thousands of 1998 Dollars

	Mean	Median
1998	71.6 <i>4.1</i>	282.5 <i>16.4</i>
1995 ^a	60.9 <i>2.4</i>	224.8 <i>14.9</i>
<i>Memo items:</i>		
1992 ^b	56.5 <i>3.3</i>	212.7 <i>13.8</i>
1989 ^c	59.7 <i>5.2</i>	236.9 <i>50.1</i>
<i>Standard errors due to imputation and sampling are given in italics.</i>		
a. The nominal figures were increased by 6.2 percent for inflation.		
b. The nominal figures were increased by 14.1 percent for inflation.		
c. The nominal figures were increased by 27.3 percent for inflation.		

Table 2: Gini Coefficients for Net Worth, 1995, and 1998 SCFs

1998	0.794 <i>0.010</i>
1995	0.785 <i>0.011</i>
<hr/> <i>Memo items:</i>	
1992	0.781 <i>0.010</i>
1989	0.787 <i>0.016</i>
<i>Standard errors due to imputation and sampling are given in italics.</i>	

Gini Coefficients

The Gini coefficient is a popular statistic for characterizing the overall difference between two wealth distributions. This statistic is defined in terms of the Lorenz curve, which is a graph of the share of total wealth held by all families at or below each percentile of the wealth distribution, plotted by the percentiles of that distribution. Thus, the graph ranges from the origin (where the wealth share and the population percentile are identically zero) to the point where both the cumulative percentage share of wealth and the percentile of the distribution are equal to 100 (everyone altogether owns all the wealth); the graph lies below a straight line connecting those two points. The farther the graph lies below the line, the more unequal is the distribution. The Gini coefficient summarizes this difference as the ratio of the area between the line and the curve and the total area beneath the line. Thus, higher levels of the Gini coefficient indicate greater inequality in this sense.

The increase in the point estimate of the coefficient from 0.785 in 1995 to 0.794 in 1998 (table 2) suggests that there was some increase in inequality. However, as the standard errors of the estimates indicate, the difference cannot be said to be statistically significant at conventional

confidence levels. Moreover, the coefficient has not changed significantly at least since the 1989 SCF.

Wealth Shares

Because the Gini coefficient aggregates across the entire distribution, it could mask important changes that would emerge by breaking out different parts of the wealth distribution. According to the SCF, the share of total net worth held by families in the bottom 90 percent of the wealth distribution declined by 0.9 percentage points from 32.2 percent of the total in 1995 to 31.3 percent in 1998 (table 3). However, the difference is not statistically significant. Although the shifts shown within the top 10 percent of the distribution are not significant either, it is interesting to note that the point estimates suggest a *decrease* in the share of the top ½ percent of the distribution, in favor of the rest of the top 10 percent. It is the overall reallocation of wealth 3

Table 3: Proportion of Total Net Worth Held by Different Percentile Groups: 1989, 1992, 1995 and 1998 SCFs

<i>Survey year</i>	<i>Percentile of the net worth distribution</i>			
	0 to 89.9	90 to 99	99 to 99.5	99.5 to 100
1998	31.3 <i>1.7</i>	34.7 <i>1.7</i>	8.2 <i>0.5</i>	25.8 <i>1.8</i>
1995	32.2 <i>1.8</i>	33.1 <i>1.4</i>	7.6 <i>0.7</i>	27.1 <i>2.0</i>
1992	33.0 <i>1.7</i>	36.9 <i>1.9</i>	7.5 <i>0.5</i>	22.6 <i>1.4</i>
1989	32.7 <i>3.1</i>	37.1 <i>3.5</i>	7.3 <i>1.2</i>	22.9 <i>2.8</i>
<i>Memo items:</i>				
1983 ^a	33.4	35.1	7.2	24.3
1963 ^a	36.1	32.0	7.2	24.6

Standard errors due to imputation and sampling are given in italics (standard errors are not available for 1983 and 1963).
^a See Avery, Eliehausen, and Kennickell [1988].

to the lower part of the top 10 percent that is being picked up by the shift in the point estimate of the Gini coefficient for 1998 and the relative shifts in the mean and median. Looking over a series of comparable wealth share estimates dating back to the 1989 SCF, it is remarkable just how stable the estimates have been.

To provide a more detailed understanding of the underlying wealth changes, table 4a shows estimated portfolio holdings in 1995 for the wealth percentile groups in table 3, and table 4b shows the corresponding estimates for 1998. One contrast is particularly striking in both years of data: For the bottom 90 percent of the net worth distribution, principal residences are the most important asset overall, and for the top of the distribution, businesses (including closely-held corporations and all other types of businesses that are not publicly traded) are by far the most important asset overall.

It is also clear from these tables that, despite the relative stability in the wealth concentration estimates, there were some very large changes in the portfolios of all of the wealth groups. Between 1995 and 1998, assets overall increased by 37.8 percent in nominal terms, and they increased most rapidly for the groups between the 90th and 99.5th percentiles, as is reflected in the point estimates of their wealth shares. The asset category with the largest increase was stocks (including only directly held publicly traded stocks, stock mutual funds, and stocks and stock funds held through IRAs and Keogh accounts—but *not* stock held through thrift accounts, which include mainly 401(k)-type accounts), which rose by 104.1 percent from 1995 to 1998. Total liabilities rose by 33.5 percent.

Although stock holdings rose for all the wealth groups, they rose most for the bottom 90 percent of the wealth distribution, perhaps reflecting the increased prevalence of stock ownership among this group in a time when the market was rising. However, because stock holdings of the group were still relatively small, the growth in this asset contributed only about half as much to the overall increase in net worth for the group as did principal residences. Large contributions to wealth growth for the group were also made by other real estate, thrift accounts, and other accounts (mainly savings accounts, time deposits and money market funds). A sizable increase in liabilities for this group—largely principal residence debt—offset about a quarter of their rise in asset holdings.

For the households in the top 10 percent of the wealth distribution, changes in debt were relatively less important in their portfolios. Their wealth gains were largely driven by increased holdings of stocks and business assets.

Table 4a: Holdings and Distribution of Assets, Debts, and Income, by Percentiles of Net Worth, 1995. All dollar values are given in billions of 1995 dollars.

Item	Percentile of the net worth distribution									
	All households		0 to 89.9		90 to 99		99 to 99.5		99.5 to 100	
	Holdings	% of total	Holdings	% of total	Holdings	% of total	Holdings	% of total	Holdings	% of total
Assets	24,808.7	100.0	9,497.5	38.3	7,687.4	31.0	1,696.6	6.8	5,916.5	23.8
	<i>1,472.2</i>	<i>0.0</i>	<i>382.4</i>	<i>1.8</i>	<i>564.9</i>	<i>1.2</i>	<i>251.9</i>	<i>0.6</i>	<i>712.4</i>	<i>1.9</i>
Princ. residence	7,623.8	100.0	5,082.1	66.7	1,936.8	25.4	208.8	2.7	395.4	5.2
	<i>192.3</i>	<i>0.0</i>	<i>136.6</i>	<i>1.1</i>	<i>92.3</i>	<i>0.9</i>	<i>21.0</i>	<i>0.3</i>	<i>51.6</i>	<i>0.6</i>
Other real estate	2,684.6	100.0	548.3	20.4	1,169.8	43.6	236.0	8.8	728.9	27.2
	<i>233.2</i>	<i>0.0</i>	<i>65.0</i>	<i>2.0</i>	<i>120.3</i>	<i>2.8</i>	<i>44.4</i>	<i>1.4</i>	<i>125.3</i>	<i>3.3</i>
Stocks	2,752.5	100.0	442.3	16.1	1,154.2	41.9	289.6	10.5	864.9	31.4
	<i>328.6</i>	<i>0.0</i>	<i>48.0</i>	<i>1.8</i>	<i>136.2</i>	<i>3.9</i>	<i>66.5</i>	<i>1.7</i>	<i>209.1</i>	<i>4.6</i>
Bonds	1,147.2	100.0	116.2	10.1	391.5	34.1	109.0	9.5	529.5	46.1
	<i>138.3</i>	<i>0.0</i>	<i>17.9</i>	<i>1.6</i>	<i>51.5</i>	<i>3.7</i>	<i>44.8</i>	<i>3.2</i>	<i>96.6</i>	<i>4.5</i>
Trusts	528.4	100.0	72.9	13.8	222.5	42.1	54.1	10.2	178.7	33.8
	<i>72.5</i>	<i>0.0</i>	<i>12.9</i>	<i>2.6</i>	<i>38.9</i>	<i>5.4</i>	<i>36.4</i>	<i>5.8</i>	<i>52.2</i>	<i>7.7</i>
Life Insurance	649.0	100.0	361.4	55.7	175.4	27.0	40.1	6.2	72.0	11.1
	<i>48.8</i>	<i>0.0</i>	<i>27.7</i>	<i>3.4</i>	<i>27.2</i>	<i>3.2</i>	<i>19.1</i>	<i>2.9</i>	<i>21.1</i>	<i>2.9</i>
Checking accts	266.4	100.0	153.3	57.6	69.8	26.2	12.3	4.6	30.8	11.6
	<i>12.3</i>	<i>0.0</i>	<i>6.8</i>	<i>2.1</i>	<i>6.5</i>	<i>1.9</i>	<i>2.7</i>	<i>1.0</i>	<i>5.8</i>	<i>1.9</i>
Thrift accounts	1,236.1	100.0	543.2	44.0	533.4	43.1	82.8	6.7	76.6	6.2
	<i>84.7</i>	<i>0.0</i>	<i>47.7</i>	<i>3.1</i>	<i>67.3</i>	<i>3.8</i>	<i>33.2</i>	<i>2.7</i>	<i>33.7</i>	<i>2.6</i>
Other accounts	2,035.3	100.0	785.0	38.6	705.1	34.6	148.7	7.3	396.0	19.5
	<i>171.9</i>	<i>0.0</i>	<i>64.8</i>	<i>2.9</i>	<i>59.6</i>	<i>2.6</i>	<i>54.0</i>	<i>2.4</i>	<i>119.4</i>	<i>4.6</i>
Businesses	4,013.0	100.0	310.3	7.7	830.6	20.7	456.0	11.4	2,411.5	60.1
	<i>535.4</i>	<i>0.0</i>	<i>31.0</i>	<i>1.1</i>	<i>153.6</i>	<i>2.7</i>	<i>147.0</i>	<i>2.4</i>	<i>340.2</i>	<i>3.7</i>
Automobiles	1,107.9	100.0	859.5	77.6	197.1	17.8	22.2	2.0	29.0	2.6
	<i>21.7</i>	<i>0.0</i>	<i>17.6</i>	<i>0.8</i>	<i>8.3</i>	<i>0.7</i>	<i>4.6</i>	<i>0.4</i>	<i>4.7</i>	<i>0.4</i>
Other assets	764.5	100.0	222.9	29.2	301.1	39.4	37.0	4.8	203.1	26.6
	<i>72.9</i>	<i>0.0</i>	<i>18.2</i>	<i>2.8</i>	<i>50.2</i>	<i>4.2</i>	<i>12.5</i>	<i>1.5</i>	<i>38.1</i>	<i>4.0</i>
Liabilities	3,933.0	100.0	2,778.8	70.7	770.4	19.6	116.6	3.0	266.6	6.8
	<i>114.6</i>	<i>0.0</i>	<i>82.3</i>	<i>1.6</i>	<i>59.1</i>	<i>1.3</i>	<i>23.6</i>	<i>0.6</i>	<i>47.8</i>	<i>1.1</i>
Princ. res. debt	2,648.8	100.0	2,070.7	78.2	458.9	17.3	48.6	1.8	70.4	2.7
	<i>70.0</i>	<i>0.0</i>	<i>63.8</i>	<i>1.2</i>	<i>35.4</i>	<i>1.2</i>	<i>8.5</i>	<i>0.3</i>	<i>10.5</i>	<i>0.4</i>
Other r/e debt	579.7	100.0	142.4	24.6	242.0	41.7	57.6	9.9	137.2	23.7
	<i>58.8</i>	<i>0.0</i>	<i>25.8</i>	<i>3.6</i>	<i>34.8</i>	<i>4.2</i>	<i>17.5</i>	<i>2.8</i>	<i>31.0</i>	<i>4.4</i>
Other debt	704.6	100.0	565.7	80.3	69.5	9.9	10.3	1.5	58.9	8.4
	<i>29.4</i>	<i>0.0</i>	<i>15.4</i>	<i>2.8</i>	<i>8.9</i>	<i>1.2</i>	<i>7.9</i>	<i>1.1</i>	<i>19.3</i>	<i>2.5</i>
Net worth	20,875.7	100.0	6,718.7	32.2	6,917.0	33.1	1,580.1	7.6	5,649.9	27.1
	<i>1,393.3</i>	<i>0.0</i>	<i>320.5</i>	<i>1.8</i>	<i>524.8</i>	<i>1.4</i>	<i>248.2</i>	<i>0.7</i>	<i>687.3</i>	<i>2.0</i>
Total income	4,297.1	100.0	2,949.6	68.6	852.6	19.8	147.7	3.4	346.3	8.1
	<i>99.8</i>	<i>0.0</i>	<i>57.5</i>	<i>1.1</i>	<i>45.9</i>	<i>0.8</i>	<i>20.4</i>	<i>0.5</i>	<i>46.1</i>	<i>1.0</i>
Memo items:										
Min net worth (\$Th)	(Negative)		(Negative)		388.4		2,563.6		4,762.0	
Num. of obs.	4,299.0		2837.0		799.0		168.0		495.0	
Wgtd num. units (M)	99.0		89.1		8.9		0.5		0.5	

Standard errors due to imputation and sampling are given in italics. See notes for definitions of the categories

Table 4b: Holdings and Distribution of Assets, Debts, and Income, by Percentiles of Net Worth, 1998. All dollar values are given in billions of 1998 dollars.

Item	Percentile of the net worth distribution									
	All households		0 to 89.9		90 to 99		99 to 99.5		99.5 to 100	
	Holdings	% of total	Holdings	% of total	Holdings	% of total	Holdings	% of total	Holdings	% of total
Assets	34,179.1	100.0	12,699.1	37.2	11,183.5	32.7	2,469.1	7.2	7,811.7	22.9
	<i>1,802.6</i>	<i>0.0</i>	<i>720.1</i>	<i>1.7</i>	<i>996.6</i>	<i>1.6</i>	<i>207.8</i>	<i>0.5</i>	<i>606.7</i>	<i>1.5</i>
Princ. residence	9,644.8	100.0	6,219.4	64.5	2,565.3	26.6	327.2	3.4	532.2	5.5
	<i>304.7</i>	<i>0.0</i>	<i>223.9</i>	<i>1.4</i>	<i>152.4</i>	<i>1.3</i>	<i>52.9</i>	<i>0.5</i>	<i>68.3</i>	<i>0.7</i>
Other real estate	3,526.4	100.0	900.3	25.5	1,447.5	41.0	359.8	10.2	817.5	23.2
	<i>298.9</i>	<i>0.0</i>	<i>122.6</i>	<i>2.8</i>	<i>162.4</i>	<i>2.8</i>	<i>94.9</i>	<i>2.3</i>	<i>106.8</i>	<i>2.7</i>
Stocks	5,617.4	100.0	999.1	17.8	2,213.3	39.4	638.3	11.4	1,763.8	31.4
	<i>450.8</i>	<i>0.0</i>	<i>118.4</i>	<i>1.9</i>	<i>295.7</i>	<i>3.2</i>	<i>93.7</i>	<i>1.8</i>	<i>224.9</i>	<i>3.2</i>
Bonds	1,174.2	100.0	163.8	14.0	505.9	43.0	125.9	10.8	377.7	32.2
	<i>104.1</i>	<i>0.0</i>	<i>28.3</i>	<i>2.4</i>	<i>86.4</i>	<i>5.3</i>	<i>43.1</i>	<i>3.6</i>	<i>53.0</i>	<i>4.1</i>
Trusts	1,229.9	100.0	123.2	10.1	477.9	38.8	116.5	9.4	511.6	41.7
	<i>155.4</i>	<i>0.0</i>	<i>19.5</i>	<i>2.1</i>	<i>102.7</i>	<i>6.1</i>	<i>52.6</i>	<i>3.8</i>	<i>106.3</i>	<i>7.5</i>
Life Insurance	874.1	100.0	425.8	48.7	358.9	41.1	25.3	2.9	64.1	7.3
	<i>74.9</i>	<i>0.0</i>	<i>53.0</i>	<i>4.5</i>	<i>54.6</i>	<i>4.3</i>	<i>9.7</i>	<i>1.2</i>	<i>12.5</i>	<i>1.5</i>
Checking accts	333.4	100.0	189.4	56.8	91.8	27.5	20.5	6.2	31.7	9.5
	<i>29.3</i>	<i>0.0</i>	<i>13.1</i>	<i>4.1</i>	<i>17.5</i>	<i>4.6</i>	<i>1.9</i>	<i>5.1</i>	<i>9.3</i>	<i>2.6</i>
Thrift accounts	1,578.7	100.0	839.5	53.2	536.5	34.0	65.1	4.1	137.5	8.7
	<i>122.1</i>	<i>0.0</i>	<i>76.2</i>	<i>3.0</i>	<i>65.2</i>	<i>2.9</i>	<i>30.4</i>	<i>1.9</i>	<i>33.8</i>	<i>1.9</i>
Other accounts	2,628.1	100.0	1,167.1	44.4	1,004.8	38.2	148.1	5.6	307.7	11.7
	<i>169.5</i>	<i>0.0</i>	<i>95.0</i>	<i>2.7</i>	<i>109.8</i>	<i>2.8</i>	<i>39.2</i>	<i>1.6</i>	<i>54.9</i>	<i>1.9</i>
Businesses	5,598.9	100.0	481.3	8.6	1,481.2	26.4	564.2	10.1	3,063.9	54.8
	<i>570.5</i>	<i>0.0</i>	<i>60.7</i>	<i>1.2</i>	<i>230.3</i>	<i>2.8</i>	<i>142.9</i>	<i>2.2</i>	<i>365.5</i>	<i>4.0</i>
Automobiles	1,293.3	100.0	971.8	75.1	241.9	18.7	27.3	2.1	52.1	4.0
	<i>31.9</i>	<i>0.0</i>	<i>26.9</i>	<i>1.1</i>	<i>15.0</i>	<i>1.0</i>	<i>5.9</i>	<i>0.5</i>	<i>6.9</i>	<i>0.5</i>
Other assets	679.8	100.0	218.4	32.1	258.4	38.0	50.8	7.5	151.9	22.4
	<i>65.1</i>	<i>0.0</i>	<i>28.5</i>	<i>3.3</i>	<i>42.0</i>	<i>4.3</i>	<i>17.6</i>	<i>2.4</i>	<i>25.8</i>	<i>3.6</i>
Liabilities	5,250.2	100.0	3,657.1	69.7	1,138.0	21.7	107.0	2.0	347.4	6.6
	<i>187.0</i>	<i>0.0</i>	<i>136.6</i>	<i>1.6</i>	<i>94.7</i>	<i>1.5</i>	<i>22.8</i>	<i>0.4</i>	<i>55.3</i>	<i>1.0</i>
Princ. res. debt	3,499.9	100.0	2,632.5	75.2	681.6	19.5	58.1	1.7	127.7	3.6
	<i>115.5</i>	<i>0.0</i>	<i>98.0</i>	<i>1.5</i>	<i>54.3</i>	<i>1.4</i>	<i>20.0</i>	<i>0.6</i>	<i>37.1</i>	<i>1.0</i>
Other r/e debt	716.5	100.0	243.1	33.9	288.5	40.3	40.1	5.6	144.3	20.2
	<i>76.5</i>	<i>0.0</i>	<i>44.4</i>	<i>4.4</i>	<i>44.0</i>	<i>4.3</i>	<i>11.7</i>	<i>1.6</i>	<i>29.7</i>	<i>3.8</i>
Other debt	1,033.8	100.0	781.5	75.6	167.9	16.2	8.8	0.9	75.4	7.3
	<i>51.5</i>	<i>0.0</i>	<i>40.2</i>	<i>2.3</i>	<i>23.1</i>	<i>2.0</i>	<i>4.5</i>	<i>0.4</i>	<i>19.1</i>	<i>1.7</i>
Net worth	28,928.9	100.0	9,042.1	31.3	10,045.5	34.7	2,362.1	8.2	7,464.3	25.8
	<i>1,684.8</i>	<i>0.0</i>	<i>622.6</i>	<i>1.7</i>	<i>931.8</i>	<i>1.7</i>	<i>204.1</i>	<i>0.5</i>	<i>590.1</i>	<i>1.8</i>
Total income	5,371.5	100.0	3,577.5	66.6	1,135.8	21.1	184.3	3.4	472.6	8.8
	<i>158.3</i>	<i>0.0</i>	<i>90.7</i>	<i>1.4</i>	<i>86.9</i>	<i>1.2</i>	<i>37.6</i>	<i>0.7</i>	<i>62.3</i>	<i>1.1</i>
Memo items:										
Min net worth (\$Th)	(Negative)		(Negative)		489.4		3,692.8		5,721.7	
Num. of obs.	4,309.0		2924.0		750.0		120.0		515.0	
Wgtd num. units (M)	102.5		92.2		9.3		0.5		0.5	

Standard errors due to imputation and sampling are given in italics. See notes for definitions of the categories.

Notes to tables 4a and 4b.

Definitions of assets, liabilities and income.

Assets: All types of assets.

Principal residence: The residence that the survey respondent considered his or her principal residence.

Other real estate: All other types of real estate except those owned through a business.

Stocks: All types of stock and stock mutual funds (including “balanced” funds), including those held through an IRA or Keogh, but not those held through a thrift account.

Bonds: All types of bonds except savings bonds, and bond mutual funds, including those held through an IRA or Keogh, but not those held through a thrift account.

Trusts: All trusts with an equity interest, managed investment accounts, and private annuities.

Life Insurance: Cash value of whole life and universal life insurance.

Checking accounts: All types of standard checking accounts and share draft accounts.

Thrift accounts: Pension and other retirement accounts from a current job from which withdrawals can be made or loans taken out.

Other accounts: Money market and savings accounts, certificates of deposit, and savings bonds.

Businesses: All types of businesses except corporations with publicly-traded stock.

Automobiles: Automobiles, trucks, motorcycles, boats, air planes, and other vehicles not owned by a business.

Other assets: Includes all other assets (antiques, paintings, jewelry, metals, futures contracts, oil leases, etc.).

Liabilities: All types of debts.

Principal residence debt: All mortgages and home equity lines associated a principal residence.

Other real estate debt: All other debt secured by real estate.

Other debt: All other types of debt (installment credit, credit cards, etc.).

Net worth: Assets minus liabilities.

Total income: Total household income from all sources in the year preceding the survey.

All items are defined for the primary economic unit within each survey household.

Graphical Summary

Two graphical devices are presented here for characterizing more completely than is possible in tabular form the changes in the wealth distribution across the entire distribution. First, figure 1 looks directly at changes in wealth levels across the distribution.⁶ Each percentile of the net worth distribution, the graph shows the (nominal) difference between the level of net worth associated with the percentile in 1998 and the corresponding level for the same percentile in 1995.⁷ The dotted horizontal line indicates the average of the changes, and the large dots mark the boundaries of the 95 percent confidence interval at selected values of the central estimates.⁸ For families below about the 25th percentile of the wealth distribution, net worth either fell or was about unchanged; except for the families at the very bottom, the initial wealth levels are close to zero. Above the 25th percentile, wealth gains are progressively larger, and the positive slope is clearly significant until about the top 10 percent of the distribution.

To increase its share of wealth, a group would need to have had a greater than average percentage change in the level of its wealth. To probe this question, figure 2 shows the percentage changes in wealth corresponding to the level changes in figure 1.⁹ The jumpy part of the graph below about the 25th percentile is largely a product of modest changes amplified as a result of dividing by very small base 1995 values. Above that percentile, the rate of increase rises up through about the 85th percentile; however because the confidence intervals around the selected points have a very high degree of overlap, the increases do not signal a significant shift in

6. Because the underlying data are cross-sectional, the comparisons describe changes in the distribution, which are not necessarily the changes that were experienced by individual households at a given point in the distribution in either 1995 or 1998.

7. For purposes of these figures, negative net worth has been assigned a value of zero. To show meaningful variation in the changes across the distribution, the horizontal axis in figure 1 has been scaled using the inverse hyperbolic sine with a scale parameter of 0.0001; close to zero, the transformation is close to linear, and away from zero, it is approximately logarithmic.

8. The confidence interval is constructed on a “point-wise” basis to represent the central 95 percent range of the variation in the estimates that can be attributed to sampling. At each selected point, the confidence interval is estimated using a simulation technique.

9. The percentage change is defined as the $100 * (\text{wealth}_{1998} - \text{wealth}_{1995}) / \text{Max}(1, \text{absolute value}(\text{wealth}_{1995}))$.

wealth concentration within that region.¹⁰ Above about the 85th percentile, the percentage gain turns down, then increases rapidly for most of the top decile before finally turning down sharply at the top; although these changes might be taken to signal a complex shift of wealth away from the lower part of the distribution and within the top part, it is clear that the changes are not estimated with sufficient precision to be considered statistically significant.

10. One might argue that the confidence intervals reported are not actually the appropriate information needed to make comparisons of change. Because the intervals are constructed on a point-wise basis, they do not account for the possibility that the changes at the various percentiles may be correlated within the simulated distributions. Thus, one might want to characterize the complete joint distributions of outcomes across the wealth distribution. However, there is no obvious graphical device for displaying this substantially more complicated information.

Figure 1: Nominal Change in the Level of Net Worth from 1995 to 1998 by Percentiles of the Distribution of Net Worth, and Estimates of 95 Percent Point-Wise Confidence Intervals

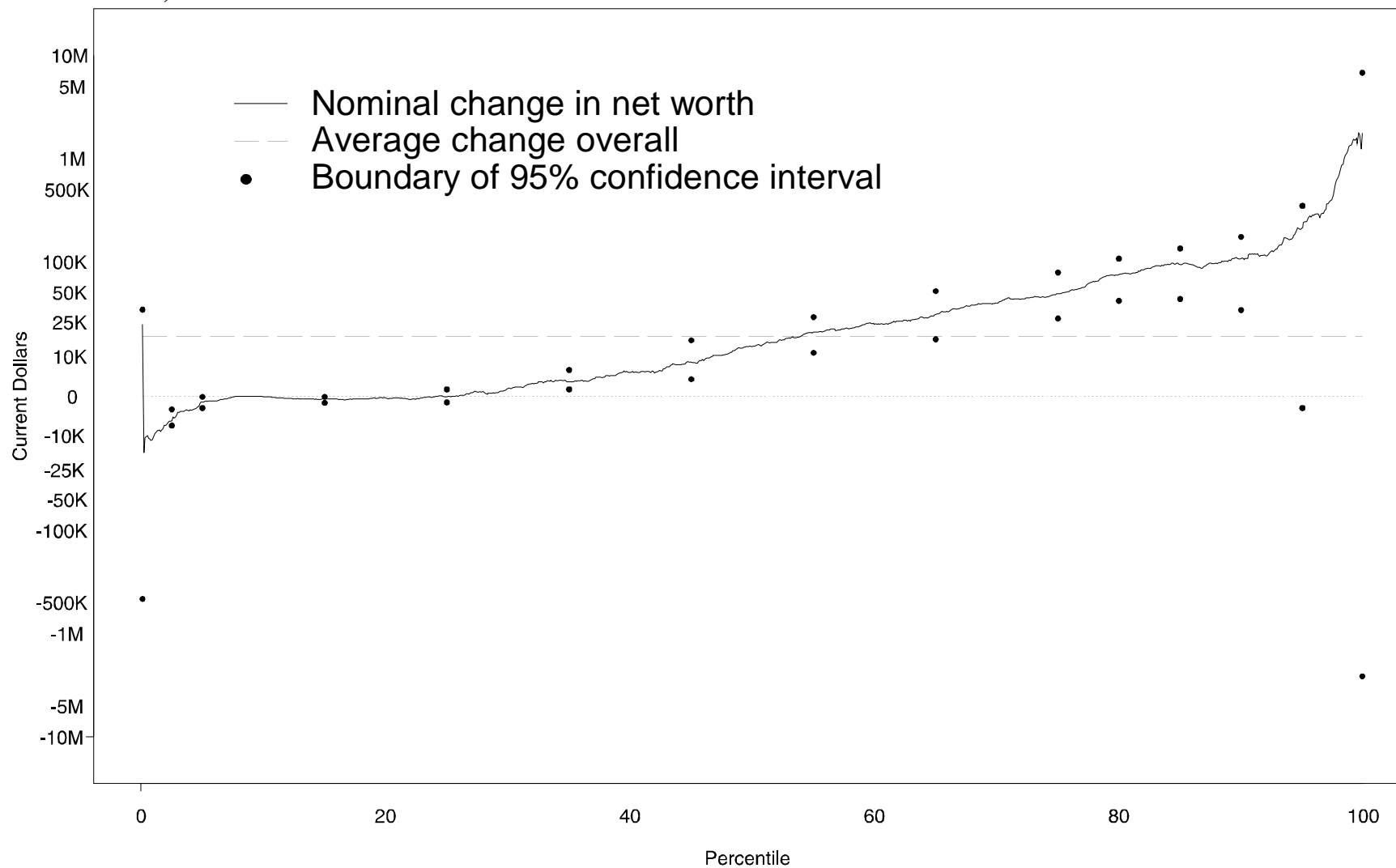


Figure 2: Percentage Change in Net Worth from 1995 to 1998 by Percentiles of the Distribution of Net Worth, and Estimates of 95 Percent Point-Wise Confidence Intervals

